NASA Glenn Success Stories

# Ceramic Analysis and Reliability Evaluation of Structures" (CARES)



# **Philips**

## **TECHNOLOGY**

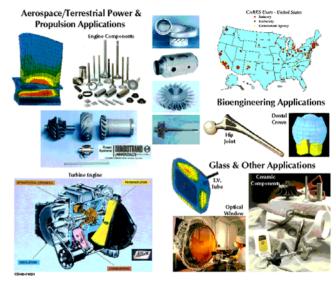
Software that can establish the reliability and life of brittle material (e.g. ceramic, intermetallic, graphite) structures in a variety of applications via computer simulation and design.

### **COMMERCIAL APPLICATION**

- Aerospace applications
- Automotive applications
- Propulsion and power applications
- Bioengineering applications
- Glass and other applications

#### **SOCIAL / ECONOMIC BENEFIT**

- ◆ Enables accurate life predictions of brittle material components
- ◆ Accelerates the commercial application of high-value added materials and components
- ◆ Accurate computer simulation prior to costly component fabrication
- ◆ An integrated design tool that government, industry, and academia can adapt to their local computer environment



**CARES** 

#### NASA APPLICATIONS

- ◆ Cost effective approach to systematically optimize the design of brittle material components in aircraft engines
- ◆ Extensive computational capabilities into one comprehensive package

NASA Contact: Glenn Commercial Technology Office